

TS6MN-C

SONAR TEST SET

1. GENERAL. This procurement requires a three frequency, fixed tuned or tunable, solid-state receiving set including a plug-in microphone with headset, sound concentrator and contact probe for use with a hydrophone as an acoustical, out of the water, detection device for surfaced submarine sonar tests. The unit must be portable, self contained and battery operated.

2. CLASSIFICATION. The test set described herein shall meet the requirements of MIL-T-28800, Type III, Class 5, Style E, Color R for Navy shipboard, submarine, and shore applications with the following exceptions:

a. The relative humidity requirement is limited to 95% noncondensating.

b. The operating and nonoperating altitude requirements are not invoked.

c. The EMI requirement is not invoked.

3. OPERATIONAL REQUIREMENTS. The equipment shall be capable of measuring signals within the parameters and accuracies specified herein.

3.1 Operating frequencies. At least 28 kHz, 45 kHz and 205 kHz.

3.2 Bandwidth. At least 4 kHz at the -3 dB point and 10 kHz at the -20 dB point.

3.3 Audible indicator. The test set must be capable of generating an audio tone with the pitch and intensity directly proportional to the level of received signal. The frequency of the audio tone should be nominally 1 kHz.

3.4 Receive sensitivity. The input sensitivity shall be at least -20 dB, where the 0 dB reference is equal to the acoustic pressure of 1

microbar measured at a distance of 1 yard from the acoustical source.

3.5 Phone jack. The equipment shall be provided with an audio output phone panel jack for monitoring the audio output via a headset provided with the equipment.

3.6 Carrying case. A carrying case shall be provided for storing all components of the test set.

4. GENERAL REQUIREMENTS.

4.1 Power. Battery operated in accordance with MIL-T-28800 requirements.

4.2 Dimensions. The total volume shall be nominally 23,204 cm³ (1,416 in³).

4.3 Weight. The total weight shall be nominally 4.3 kg (9.5 lbs).

4.4 Calibration interval. The calibration interval shall be 12 months minimum. The equipment shall be within all accuracy requirements specified herein, with a 72% or greater confidence factor following a calibration interval of 12 months.

4.5 Battery operating life. The batteries shall be either rechargeable with at least a 40 hour operating life (recharge time less than 24 hours) or non-rechargeable batteries capable of 150 hours of intermittent service.